average results, but do not seem to be available in individual cases. Dr. Wolff goes so far as to state that, in his particular locality, he regards even the azimuth of a star to be an element in the amount of stellar light extinguished. This may be the case at Oxford also, possibly owing to the confluence of so many streams of water. And this suspicion is by no means to be disregarded in reference to our own method of observation; because this method, in part, consists in not observing stars necessarily on the meridian, but in such positions as shall best secure a general uniformity in the altitudes of all the stars observed. Considering the difficulty and importance of this branch of the subject, and the necessity of varying both the meteorological and the geographical conditions under which the observations should be made, I purpose to undertake a journey to the south, probably to Cairo, in order to collect additional information for the solution of the problem, and to render this contribution to stellar photometry as complete as possible.

In what has been herein advanced, regarding

(1) The caution that is now shown to be necessary before adopting a method of photometry by varying telescopic apertures;
(2) The possibility of securing practical accuracy of stellar photometry in the use of a wedge of neutral-tinted glass;
(3) The possibility of correctly measuring thereby the relative brilliance of coloured stars, whether single or double,

I hope something useful has been added to our astronomical methods of research.

On Observations of Comets 1881 *II. & III., of Wells's Comet, and of the Great Comet* (b) 1882, *made at the Royal Observatory, Cape of Good Hope.* By David Gill, LL.D., Her Majesty's Astronomer at the Cape of Good Hope.

The following papers contain all the observations of comets made at this Observatory since 1880, with the exception of a few observations of Wells's Comet, made with the heliometer, and those of the present Great Comet, which are not yet reduced.

In April 1881, when on a brief visit to England, I took with me, and forwarded to Messrs. Repsold, of Hamburg, the tube of the 8½-foot equatorial, for the purpose of having a new micrometer and new illuminating arrangements made for it.

During my absence, and whilst the tube was with Messrs. Repsold, Tebbutt's Great Comet appeared, and it was admirably

observed with the heliometer, by my friend and guest Dr. Elkin. His observations of this comet form the first part of the present communication.

About the beginning of September 1881 it became desirable to secure observations of Schäberle's Comet in the southern hemisphere, and these observations were of necessity first made with the heliometer. The opportune arrival of the Repsold micrometer prevented the discontinuity of the series of observations, as the comet, at the end of September, was becoming too faint for the limited light-grasp of the heliometer. The exquisite bright wire illumination of the new Repsold micrometer, capable of the most perfect modulation, permitted observations to be made whenever the comet was visible in a dark field. The comet was followed till Oct. 18, when it only became visible in twilight a few minutes before it set behind Table Mountain. The last observations were made with the mountain's ridge in the edge of the field of view.

The observations made by myself are indicated by the letter G, those by Dr. Elkin by the letter E.

I have thought it desirable to publish Mr. Finlay's observations of Wells's Comet without waiting for meridian observations of the comparison stars. These determinations can equally well be made at some of the numerous northern observatories, and many of the stars have probably been already observed in connection with the zone observations of the *Astronomische Gesellschaft*.

The observations of the Great Comet of the present year are accompanied by notes from the different observers.

Royal Observatory,
Cape of Good Hope:
1882, *Oct.* 9.

Heliometer Observations of Comet 1881 *II.* (*Tebbutt*), *made by W. L. Elkin, Ph.D.*

1881.	Cape Mean Time.	Distance.	Obs.	Position Angle.	Obs.	$\Delta\alpha$	$\Delta\delta$
	h m s	″		° ′		′ ″	′ ″
May 31	6 19 24	2057·3	4	177 27·6	4	+ 1 44·7	−34 15·2
June 1	6 8 51	1578·3	2				
3	5 53 47	3561·8	4	96 40·7	4	+65 48·6	− 6 54·2
3	6 27 4	1495·2	2	215 1·9	2	−15 56·8	−20 24·4
4	5 59 57	3544·0	4	354 2·0	4	− 6 48·4	+58 44·7
8	5 48 9	4586·6	2				
9	5 31 18	2514·8	4	30 58·3	4	+22 26·6	+35 56·3
9	18 3 8	1393·6	4	38 15·9	4	+14 51·8	+18 14·2

1881.	Mean Places of Comparison Stars.		Authority.	Red. to App. Place.	
May 31	75° 44′ 41″·7	−29° 1′ 59″·8	2 Merid. Obs.	+2″·5	−1″·5
June 1	75 44 41·7	−29 7 59·8	,,	+2·6	−1·3
3	75 6 34·0	−26 18 49·6	Stone	+4·3	−0·3
3	76 28 35·0	−26 3 35·6	Stone	+4·4	−0·9
4	76 28 35·0	−26 3 35·6	Stone	+4·5	−0·7
8	78 23 13·9	−18 15 28·1	3 Merid. Obs.	+8·7	−0·7
9	76 53 47·3	−16 20 50·6	Stone	+9·6	0·0
9	77 8 43·6	−14 44 46·8	3 Merid. Obs.	+10·3	0·0

Apparent Places of Comet.

May 31	75° 46′ 28″·9 + [9·980]p	−29° 42′ 16″·5 + [9·673$_n$]p
June 1	[9·973]	[9·665$_n$]
3	76 12 26·9 [9·965]	−26 25 44·1 [9·665$_n$]
3	76 12 42·6 [9·967]	−26 24 0·9 [9·711$_n$]
4	76 21 51·1 [9·962]	−25 4 51·6 [9·684$_n$]
8	[9·943]	[9·711$_n$]
9	77 16 23·5 [9·934]	−15 44 54·3 [9·727$_n$]
9	77 23 45·7 [9·931$_n$]	−14 26 32·6 [9·725$_n$]

p being the horizontal parallax, expressed in seconds of arc, and the numbers in brackets logarithms.

Heliometer Measures of Comet 1881 *III.* (*Schäberle*).

1881.	Obs.	Star of Comp.	Distance.	No. of Bisec.	Position Angle.	No. of Bisec.	Δα	Δδ
			″		° ′		m s	′ ″
Aug. 31	E	α	173·4	4	192 30·8	4	−0 2·58	− 2 49·2
31	G	α	207·1	4	182 43·3	4	−0 0·68	− 3 26·8
Sept. 1	E	β	3352·4	4	280 8·4	4	−3 44·45	+ 9 50·2
1	G	β	3275·6	4	278 16·3	4	−3 40·46	+ 7 51·2
3	G	γ	1613·2	4	289 21·6	4	−1 42·06	+ 8 54·8
3	E	γ	1552·7	4	287 30·8	4	−1 39·29	+ 7 47·2
6	E	ε	4091·3	4	275 19·6	4	−4 31·58	+ 6 19·8
6	E	δ	5027·4	4	228 16·6	4	−4 10·16	−55 45·9
7	E	ζ	3070·4	4	260 32·5	4	−3 22·06	− 8 24·6
7	G	ζ	3042·4	4	259 7·7	4	−3 19·34	− 9 33·8
8	G	η	2972·0	4	77 27·7	4	+3 13·90	+10 45·2
8	E	η	2991·3	4	78 43·7	4	+3 16·08	+ 9 44·7
9	E	θ	926·8	4	164 32·4	4	+0 16·58	−14 53·3
9	G	θ	993·9	4	163 32·0	4	+0 18·87	−15 53·2

1881.	Obs.	Star of Comp.	Distance.	No. of Bisec.	Position Angle.	No. of Bisec.	Δα	Δδ
			"		° ′		m s	′ "
Sept. 12	G	ι	1265·0	4	80 7·6	4	+1 24·31	+ 3 36·9
12	E	ι	1279·5	4	81 59·3	4	+1 25·72	+ 2 58·3
14	G	κ	2671·5	4	355 9·2	4	−0 15·41	+44 21·9
14	E	κ	2628·4	4	355 27·7	4	−0 14·20	+43 40·2
15	E	λ	1910·3	4	126 52·1	4	+1 44·63	−19 6·2
15	G	λ	1941·4	4	127 27·3	4	+1 45·51	−19 40·6
19	G	μ	2414·7	4	128 11·4	4	+2 11·96	−24 53·0
19	E	μ	2450·9	4	128 34·3	4	+2 13·24	−25 28·1
21	G	ν	2303·6	4	264 25·2	4	−2 40·89	− 3 44·0
21	E	ν	2297·8	4	263 35·0	4	−2 40·24	− 4 16·8
23	G	ξ	611·3	4	160 57·1	4	+0 14·11	− 9 37·8
23	E	ξ	641·1	4	161 1·0	4	+0 14·75	−10 6·2
24	G	ο	3329·5	4	301 50·3	4	−3 21·22	+29 16·4
24	E	ο	3305·7	4	301 24·9	4	−3 20·74	+28 43·0
27	E	π	364·7	4	277 17·7	4	−0 25·99	+ 0 46·3
27	G	π	356 2	4	272 42·1	4	−0 25·56	+ 0 16·7

Apparent Places of Comet 1881 *III.* (*Schäberle*), *deduced from Heliometer Measures.*

Cape Mean Time.

1881.		α		δ	
	h m s	h m s		° ′ ″	
Aug. 31	7 9 56	13 22 35·89	+[8·720]*p*	+14 21 56·3	+[9·792$_n$]*p*
31	7 15 17	13 22 37·79	[8·724]	+14 21 18·7	[9·787$_n$]
Sept. 1	6 39 23	13 30 0·15	[8·682]	+11 30 48·2	[9·800$_n$]
1	6 53 39	13 30 4·14	[8·697]	+11 28 49·2	[9·795$_n$]
3	6 30 4	13 42 46·32	[8·658]	+ 6 14 5·6	[9·780$_n$]
3	6 41 15	13 42 49·09	[8·671]	+ 6 12 58·0	[9·779$_n$]
6	6 40 38	13 57 31·46	[8·664]	− 0 22 40·6	[9·741$_n$]
6	7 11 51	13 57 36·98	[8·698]	− 0 25 14·6	[9·743$_n$]
7	6 38 14	14 1 29·72	[8·661]	− 2 15 18·5	[9·727$_n$]
7	6 55 0	14 1 32·44	[8·681]	− 2 16 27·7	[9·731$_n$]
8	6 46 34	14 5 7·65	[8·674]	− 4 0 8·0	[9·719$_n$]
8	7 1 42	14 5 9·83	[8·690]	− 4 1 8·5	[9·721$_n$]
9	7 17 4	14 8 28·41	[8·706]	− 5 38 37·4	[9·715$_n$]
9	7 24 58	14 8 30·70	[8·720]	− 5 39 37·3	[9·721$_n$]
12	6 43 17	14 16 38·04	[8·679]	− 9 46 2·4	[9·674$_n$]
12	6 56 59	14 16 39·45	[8·695]	− 9 46 41·0	[9·681$_n$]
14	6 49 24	14 21 5·36	[8·694]	−12 5 12·6	[9·660$_n$]
14	7 4 18	14 21 6·57	[8·709]	−12 5 54·3	[9·670$_n$]

Cape Mean Time.

1881.		α		δ	
	h m s	h m s		° ′ ″	
Sept. 15	7 5 54	14 23 5·40	[8·715]*p*	−13 8 40·7	[9·664$_n$]*p*
15	7 20 50	14 23 6·28	[8·727]	−13 9 15·1	[9·675$_n$]
19	6 53 57	14 29 43·63	[8·718]	−16 42 45·7	[9·634$_n$]
19	7 9 31	14 29 44·91	[8·730]	−16 43 20·8	[9·647$_n$]
21	7 18 49	14 32 30·93	[8·746]	−18 13 27·0	[9·654$_n$]
21	7 35 43	14 32 31·58	[8·754]	−18 13 59·8	[9·672$_n$]
23	7 51 16	14 35 0·40	[8·765]	−19 34 45·8	[9·684$_n$]
23	8 4 52	14 35 1·04	[8·768]	−19 35 14·2	[9·698$_n$]
24	7 10 55	14 36 7·41	[8·750]	−20 11 7·2	[9·636$_n$]
24	7 26 21	14 36 7·89	[8·759]	−20 11 40·6	[9·655$_n$]
27	7 16 4	14 39 17·81	[8·763]	−21 53 27·6	[9·642$_n$]
27	7 38 33	14 39 18·24	[8·771]	−21 53 57·2	[9·672$_n$]

p being the horizontal parallax of the comet, expressed in seconds of arc, and the numbers in brackets logarithms.

Measures of Δα *and* Δδ *of Comet III. (Schäberle), from Comparison Stars, with the* 8½ *ft. Equatorial.*

Cape Mean Time.				Obs.	Star.	Δα	Cape Mean Time.	Δδ
1881.	d	h m s				m s	h m s	′ ″
Sept.	30	7 18 13		G	*a*	−2 18·56 (6)	7 12 3	− 0 56·4 (3)
Oct.	1	7 10 9		E	*b*	−0 6·68 (12)	7 9 48	− 7 2·7 (6)
	2	7 14 45		E	*c*	−0 31·00 (6)	7 19 10	+ 4 7·5 (1)
	3	7 17 49		E	*d*	−1 3·21 (4)	7 18 44	+14 50·7 (5)
	4	7 11 51		E	*d*	−0 14·63 (6)	7 19 57	−10 11·1 (5)
	7	7 12 14		E	*e*	+0 51·36 (8)	7 25 33	− 2 52·8 (5)
	10	7 22 44		G	*f*	+0 13·21 (8)	7 23 22	− 2 2·1 (4)
	11	7 19 41		E	*g*	+0 22·01 (12)	7 20 12	− 6 45·3 (6)
	12	7 27 40		E	*h*	+0 17·08 (9)	7 21 41	− 2 22·5 (4)
	14	7 31 7		G	*i*	+2 47·98 (10)	7 35 9	+ 1 36·1 (6)
	16	7 24 59		G	*l*	+0 17·50 (3)	7 19 2	− 5 58·7 (2)
	17	7 30 47		G	*m*	−2 18·18 (10)	7 22 30	− 2 44·5 (4)
	18	7 32 3		G	*n*	+3 3·17 (3)	7 27 21	+ 6 49·5 (1)
	18	7 32 3		G	*o*	+2 56·60 (3)	7 27 21	+ 3 14·1 (1)

Notes.—Oct. 2. Comet faint, through fog, for pointing in declination uncertain.

16. Comet only barely visible.

Apparent Places of Comet 1881 *III.* (*Schäberle*), *from Observations with the* $8\frac{1}{2}$*-ft. Equatorial.*

Cape Mean Time.		α		Cape Mean Time.		δ	
1881.	h m s	h m s		h m s		° ′ ″	
Sept. 30	7 18 13	14 42 6·94	+[8·772]p	7 12 3	−23	23 3·5	+[9·639$_n$]p
Oct. 1	7 10 9	14 42 59·10	[8·771]	7 9 48	23	50 41·0	[9·637$_n$]
2	7 14 45	14 43 51·57	[8·776]	7 19 10	24	17 32·6	[9·652$_n$]
3	7 17 49	14 44 42·07	[8·779]	7 18 44	24	42 59·1	[9·654$_n$]
4	7 11 51	14 45 30·66	[8·780]	7 19 57	25	8 0·9	[9·659$_n$]
7	7 12 14	14 47 52·58	[8·787]	7 25 33	26	17 44·1	[9·674$_n$]
10	7 22 44	14 50 6·78	[8·794]	7 23 22	27	21 24·8	[9·680$_n$]
11	7 19 41	14 50 49·94	[8·796]	7 20 12	27	41 27·0	[9·678$_n$]
12	7 27 40	14 51 33·94	[8·797]	7 21 41	28	1 11·5	[9·684$_n$]
14	7 31 7	14 52 58·31	[8·799]	7 35 9	28	39 5·5	[9·662$_n$]
16	7 24 59	14 54 21·04	[8·801]	7 19 2	29	15 27·5	[9·675$_n$]
17	7 30 47	14 55 2·46	[8·802]	7 22 30	29	32 42·6	[9·662$_n$]
18	7 32 3	14 55 42·53	[8·802]	7 27 21	29	49 52·2	[9·660$_n$]
18	7 32 3	14 55 42·51	[8·802]	7 27 21	29	49 52·2	[9·660$_n$]

p being the horizontal parallax of the comet in seconds of arc, and the numbers in brackets logarithms.

Mean Right Ascensions and Declinations of Comparison Stars for Comet 1881 *III.* (*Schäberle*), *from Observations with the Transit Circle at the Royal Observatory, Cape of Good Hope, in the year* 1882.

Heliometer Stars.

	α 1882·0			δ 1882·0		
	h m s			° ′ ″		
α	13 22 39·40	(3)	+14 24 34·42		(3)
β	13 33 45·48	(3)	+11 20 47·31		(3)
γ	13 44 29·21	(3)	+ 6 5 1·18		(3)
δ	14 1 47·90	(3)	+ 0 30 22·73		(3)
η	14 1 54·53	(3)	− 4 11 0·64		(3)
ϵ	14 2 3·81	(3)	− 0 29 8·72		(3)
ζ	14 4 52·53	(3)	− 2 7 1·81		(3)
θ	14 8 12·60	(3)	− 5 23 51·29		(3)
ι	14 15 14·50	(3)	− 9 49 45·45		(3)
κ, λ	14 21 21·54	(3)	−12 49 39·98		(3)
μ	14 27 32·47	(3)	−16 17 57·53		(3)
ξ	14 34 47·11	(3)	−19 25 13·28		(3)
ν	14 35 12·61	(3)	−18 9 47·48		(3)
ο	14 39 29·45	(3)	−20 40 27·59		(3)
π	14 39 44·14	(3)	−21 54 17·87		(3)

Equatorial Stars.

	α 1882·0			δ 1882·0		
	h m s			° ′ ″		
b	14 43 6·65	(3)	−23 43 42·08		(4)
a	14 44 26·36	(3)	−23 22 10·86		(3)
c	14 44 23·44	(3)	−24 21 43·91		(3)
d	14 45 46·18	(3)	−24 57 53·51		(3)
e	14 47 2·13	(3)	−26 14 55·02		(3)
i	14 50 11·28	(3)	−28 40 45·48		(3)
f	14 49 54·50	(3)	−27 19 26·67		(3)
g	14 50 28·86	(3)	−27 34 45·45		(3)
h	14 51 17·78	(3)	−27 58 52·80		(4)
n	14 52 40·32	(3)	−29 56 45·73		(3)
o	14 52 46·87	(3)	−29 53 10·30		(3)
l	14 54 4·49	(3)	−29 9 32·78		(3)
m	14 57 21·59	(3)	−29 30 1·99		(3)

The figures in brackets denote the number of days on which each star was observed on the meridian.

Comet 1882 (*Wells*).

The observations of this comet were made by Mr. W. H. Finlay, first assistant, with the 7-inch equatorial.

The comet was first found at the Cape on June 14, by the help of an ephemeris computed by Messrs. Finlay and Elkin, from Dr. Bigourdan's elements. On that date one transit of the comet and of γ *Geminorum* was taken across the ring micrometer. Unfortunately the changes of the refractions at the low altitude caused the star to pass nearly across the middle of the ring, so that the difference of declination is of very little value. This observation gives

d	h	m	s			h	m	s	
June 14	5	47	44·4	C.M.T.	$\alpha =$	6	14	30·29	$+0{\cdot}0560p$
					$\delta = +$	16°	23′	5″	$-0{\cdot}589\ p$

where p denotes the comet's horizontal parallax in seconds of arc.

When first seen on June 14, the comet had a large diffused head without any marked condensation, and a tail about 2° long in the twilight. The centre of this diffused head was observed throughout, but on two occasions, when the definition was better than usual, a bright stellar nucleus was seen in the preceding part of the head.

On June 17 the tail was considerably curved towards the south, and the northern side and edge were much brighter and better defined than the southern.

After July 24 the entries were made by Dr. Elkin at a given signal, on account of the faintness of the comet.

Moonlight prevented observations after August 16.

Date.	Cape Mean Time.	d' (R.A.) ♂ − ✶	No. of Comparison.	Parallax in R.A.	d (Decl.) ♂ − ✶	No. of Comparison.	Parallax in Decl.	Comparison Star.
	h m s	m s			′ ″			
1882, June 17	5 47 25·4	+4 13·05	10	+·0532*p*				Arg. + 15°, 1431
	5 46 14·4				+6 20·00	2	−·618*p*	,,
	6 2 50·8	−4 37·96	1	+·0546*p*				Arg. + 15°, 1494
	6 14 35·7				+5 2·13	1	−·595*p*	,,
	6 11 3·5				−0 30·74	1	−·591*p*	Arg. + 15°, 1482
18	5 51 10·3	+0 24·86	23	+·0525*p*				Arg. + 15°, 1541
	6 1 43·2				2 21·73	16	−·615*p*	,,
19	6 6 56·4	+0 23·51	10	+·0531*p*				Arg. + 15°, 1601
	6 6 42·2				+5 35·41	8	−·627*p*	,,
20	6 16 19·2				−1 38·84	6	−·617*p*	Arg. + 15°, 1673
	6 23 47·4	−2 35·69	20	+·0537*p*				,,
21	6 17 33·1				+2 38·29	5	−·623*p*	Arg. + 14°, 1806
	6 20 32·5	−1 25·08	14	+·0525*p*				,,
23	6 10 38·7	+0 37·75	12	+·0496*p*				Arg. + 14°, 1882
	6 30 6·0				+3 26·19	6	−·624*p*	,,
24	6 2 57·1	+0 58·91	28	+·0476*p*				Arg. + 14°, 1917
	6 4 20·0				+1 22·45	10	−·649*p*	,,
25	6 13 26·4				+0 24·55	12	−·645*p*	Arg. + 13°, 1981
	6 18 22·3	−0 38·61	32	+·0487*p*				,,

Date.	Cape Mean Time.	d' (R.A.) $\delta - *$	No. of Comparison.	Parallax in R.A.	d (Decl.) $\delta - *$	No. of Comparison.	Parallax in Decl.	Comparison Star.
	h m s	m s			′ ″			
1882, June 26	6 30 48·1	−3 20·47	25	+·0494*p*				Arg. + 13°, 2019
	6 30 0·7				−0 14·25	4	−·637*p*	,,
	6 9 27·2	−0 5·65	4	+·0465*p*				∗ *a*
	6 15 15·7				+0 43·37	4	−·647*p*	,,
29	6 33 41·1	+2 32·86	30	+·0475*p*				Arg. + 12°, 2021
	6 31 25·4				+6 35·76	6	−·642*p*	,,
30	6 18 24·0	+0 46·59	24	+·0446*p*				Arg. + 12°, 2049
	6 23 0·1				−5 37·08	4	−·649*p*	,,
	6 33 43·3	−0 42·14	28	+·0468*p*				Arg. + 12°, 2053
	6 41 50·0				+1 25·64	10	−·637*p*	,,
July 1	6 18 30·9	−1 15·62	32	+·0439*p*				Arg. + 12°, 2076
	6 24 35·0				−6 9·58	6	−·648*p*	,,
2	6 38 43·1	−2 8·60	4	+·0462*p*				Arg. + 11°, 2108
	6 46 3·0				+2 59·98	3	−·636*p*	,,
8	6 54 28·2	−1 49·49	28	+·0461*p*				Arg. + 10°, 2157
	6 55 54·4				−5 26·78	8	−·629*p*	,,
9	6 37 55·4				+5 17·53	10	−·637*p*	ρ Leonis
	6 38 13·0	+0 10·59	31	+·0434*p*				,,
10	6 43 52·2				+3 15·96	4	−·633*p*	Arg. + 9°, 2384
	6 43 42·7	−2 24·92	20	+·0440*p*				,,

Date.	Cape Mean Time.	d' (R.A.) $\delta - *$	No. of Comparison.	Parallax in R.A.	d (Decl.) $\delta - *$	No. of Comparison.	Parallax in Decl.	Comparison Star.
	h m s	m s			′ ″			°
1882, July 11	6 37 11·7				+2 8·92	12	−·635*p*	Arg. + 3°, 9295
	6 37 34·2	+0 18·28	20	+·0428*p*				,,
12	6 43 58·9				−3 31·69	4	−·619*p*	∗*b*
	6 44 55·2	+1 19·19	12	+·0467*p*				
	7 9 0·5				+6 20·33	6	−·630*p*	Arg. + 9°, 2409
	7 5 3·6	+0 12·04	10	+·0437*p*				,,
13	6 32 43·5				+0 59·53	10	−·634*p*	Arg. + 8°, 2423
	6 33 9·7	+0 22·15	20	+·0417*p*				,,
14	6 59 34·0				−2 13·02	8	−·621*p*	Arg. + 8°, 2437
	7 0 53·2	−0 3·63	11	+·0458*p*				,,
15	6 46 45·0				−3 28·34	6	−·625*p*	Arg. + 8°, 2454
	6 49 46·2	−2 43·37	15	+·0442*p*				,,
19	7 16 19·9				−5 5·19	6	−·607*p*	Arg. + 7°, 2434
	7 14 6·3	+0 16·72	5	+·0474*p*				,,
20	7 10 57·9				+3 29·96	8	−·608*p*	Arg. + 7°, 2440
	7 11 11·5	+0 4·91	10	+·0470*p*				,,
21	6 55 36·2				−0 32·70	8	−·612*p*	∗*c*
	6 55 58·6	−0 44·39	15	+·0449*p*				,,
22	6 37 30·8	−0 14·94	5	+·0422*p*				Arg. + 7°, 2451
	6 43 55·7				+0 47·33	2	−·615*p*	,,

Date.	Cape Mean Time. h m s	d' (R.A.) ♂ − ✶ m s	No. of Comparison.	Parallax in R.A.	d (Decl.) ♂ − ✶ ′ ″	No. of Comparison.	Parallax in Decl.	Comparison Star.
1882, July 23	7 10 7·6							
	7 10 11·0	+2 40·75	2	+·0470p	+0 25·76	4	−·604p	Arg. + 6°, 2445
24	7 22 41·4	+1 4·93	20	+·0486p				″
	7 26 14·0							Arg. + 6°, 2465
26	7 12 54·6				−0 39·78	6	−·597p	″
	7 12 36·3	−1 6·59	15	+·0476p	+2 44·44	8	−·599p	Arg. + 6°, 2485
27	7 19 4·3							″
	7 23 27·0	+0 1·65	6	+·0490p	−3 44·81	4	−·595p	Arg. + 6°, 2490
Aug. 1	6 50 51·9							″
	6 50 35·5	−0 17·65	20	+·0455p	−2 8·74	8	−·596p	Arg. + 5°, 2562
2	7 36 19·9							″
	7 35 22·7	+2 9·63	20	+·0511p	+1 50·02	8	−·580p	Arg. + 5°, 2563
3	6 56 50·3							″
	7 5 24·6	+0 41·00	16	+·0480p	−0 1·68	4	−·591p	Arg. + 5°, 2573
4	6 40 41·2							″
	6 39 43·1	−0 10·60	16	+·0448p	−1 45·62	8	−·594p	Arg. + 4°, 2572
8	6 58 49·3							″
	6 56 17·1	+2 17·75	15	+·0476p	+4 8·84	8	−·584p	Arg. + 4°, 2585
								″

Date.	Cape Mean Time.	d' (R.A.) ♂−✶	No. of Comparison.	Parallax in R.A.	d (Decl.) ♂−✶	No. of Comparison.	Parallax in Decl.	Comparison Star.
	h m s	m s			′ ″			
1882, Aug. 11	7 29 25·1				−0 55·62	4	−·574p	Arg. + 3°, 2632
	7 42 48·2	+1 6·46	12	+·0529p				,,
					+3 30·91	8	−·576p	Arg. + 3°, 2638
12	7 12 31·0							,,
	7 12 17·5	−0 7·26	8	+·0502p				
					−1 46·63	4	−·577p	Arg. + 3°, 2645
14	6 26 25·3							,,
	7 8 24·8	+0 28·00	13	+·0502p				
					−1 51·19	4	−·573p	Arg. + 3°, 2663
16	7 1 45·1							,,
	7 18 29·3	−1 29·96	20	+·0516p				

Approximate places of the stars a, b and c are

	Mag.	α	δ
		h m s	° ′
✶a	10·5	8 49 15	+13 25·0
✶b	10	10 40 57	+ 9 7·6
✶c	10	Arg. + 7·2443 + 2^m 34^s·6	Arg. + 7·2443 −4′ 51″

Notes.

July 14. Comet faint through cloud.
24. From 7^h 15^m to 7^h 18^m C.M.T., the comet was passing a star of about 10·5 mag. For some time it was almost impossible to separate them, but the comet seemed to pass to the south of the star.

Aug. 8, 14. Comet extremely faint.
4, 8, 16. The declinations given by Argelander for these stars seem to be 1′ too large.

Meridian Observations of the Great Comet (b) 1882 *with the Transit Circle of the Royal Observatory, Cape of Good Hope.*

	App. R.A.	App. Decl.	Observer.
	h m s	° ′ ″	
Sept. 17	11 31 49·06	+1 37 25·3	Gill
18	11 22 33·76	+0 28 50·3	,,
22	11 1 59·00	−2 30 5·7	,,

Heliometer Observation of Great Comet (b) 1882.

	Cape Mean Time.	App. R.A.	App. Decl.	Observer.
	h m s	° ′ ″	° ′ ″	
Sept. 8	17 13 58	144 59 52·1	−0 56 30·1	Elkin

Notes on the Great Comet (b) 1882. By David Gill, LL.D., Her Majesty's Astronomer at the Cape of Good Hope.

The comet was first seen by Mr. Finlay, chief assistant, on Sept. 7, about 17^h, when on the way to his house, after observing an occultation of 5 *Cancri*.

It was then a conspicuous object, the nucleus appearing to the naked eye as bright as a star of the third magnitude. Returning at once to the equatorial, Mr. Finlay secured comparisons with an 8th magnitude star, but from an error in reading off the Declination circle the comparison star was not at first properly identified, and hence the erroneous motion in declination which I telegraphed to the Astronomer Royal.

The following morning an excellent series of measures of position angle and distance from ι *Hydræ* were secured by Dr. Elkin with the heliometer; and Mr. Finlay, with the equatorial, obtained comparisons with an 8th mag. star. My own hands were closely tied in the evening with heliometer measures for stellar parallax [it was then the epoch of maximum parallax for α *Centauri* with my comparison stars] and with measures of *Victoria* and *Sappho* extending far into the early morning. Notwithstanding these engagements, after two hours' sleep I made an attempt on Sept. 9 to secure heliometer observations, but was only able to get a rough place from the circle readings whilst the comet was visible for a few minutes between clouds. A period of cloudy and rainy weather now set in, during which the comet could only be occasionally seen before sunrise by glimpses between clouds, and it became obvious that if observations were to be made at all, some exceptional means must be adopted to secure them—means that would enable an absolute place to be secured from a single pointing whenever opportunity offered.

Accordingly I resolved to dismount the photoheliograph, to